

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number
WO 2004/062758 A3

(51) International Patent Classification⁷: **A63H 18/00**,
E01B 23/00

(21) International Application Number:
PCT/US2004/000150

(22) International Filing Date: 6 January 2004 (06.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/438,048 6 January 2003 (06.01.2003) US

(71) Applicant and

(72) Inventor: **ZANE, Tobe** [US/US]; 5130 Earl Drive, La
Canada, CA 91011 (US).

(74) Agent: **ROBBINS, Billy, A.**; Fulbright & Jaworski L.L.P.,
865 S. Figueroa Street, 29th Floor, Los Angeles, CA
90017-2571 (US).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

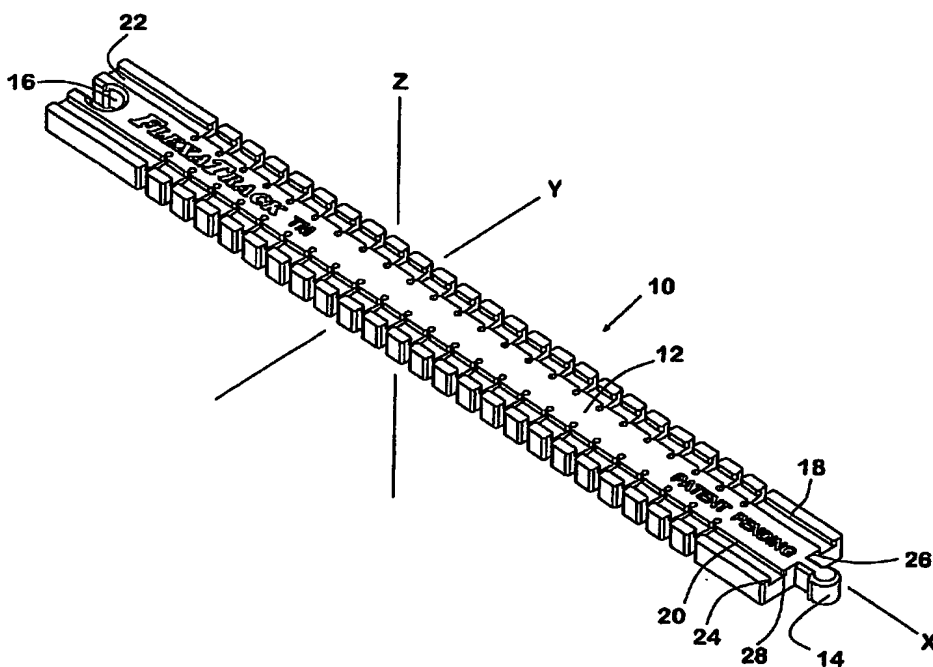
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
22 September 2005

[Continued on next page]

(54) Title: FLEXIBLE VEHICLE GUIDING ELEMENT



(57) Abstract: A flexible vehicle guiding element which includes a segment (10) having a Body (12); a female connector structure (16); side walls (26, 28); depressions (18, 20). The guiding element is bendable about x, y, and z axes to provide track which curves, spirals, or can ascend or descend.

WO 2004/062758 A3



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/00150

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A63H 18/00; E01B 23/00

US CL : 446/444; 238/10F

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 446/444; 238/10F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	4,993,631 A (NIERHOFF) 19 February 1991 (19.02.1991), see entire document.	1-11
X	US 4,397,419 A (FISCHER) 09 August 1983 (09.08.1983), see entire document.	1 and 3

A		2 and 4-11
A,E	US 2004/0084546 A1 (D'ANGELO, JR. et al.) 06 May 2004 (06.05.2004), see entire document.	1-11
Y	US 3,680,777 A ((ARAI) 01 August 1972 (01.08.1972), see entire document.	1-11
A,P	US 2003/0089789 A1 (ROTHKOPF et al.) 15 May 2003 (15.05.2003), see entire document.	1-11
Y	US 6,299,072 B1 (BURNS) 09 October 2001 (09.10.2001), see entire document.	1-11
Y	US 4,544,094 A (SCHLEY) 01 October 1985 (01.10.1985), see entire document.	1-11
Y	US 6,093,079 A (HOUSE) 25 July 2000 (25.07.2000), see entire document.	1-11

☒ Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

21 July 2005 (21.07.2005)

Date of mailing of the international search report

08 AUG 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Derris H Banks

Telephone No. 703-306-5648

INTERNATIONAL SEARCH REPORT

PCT/US04/00

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3,643,865 A (MUTZ et al.) 22 February 1972 (22.02.1972), see entire document.	1-11